SVS151 Series

SERVICE MANUAL

Ver.4-2012K

Revision History

Model	Lineup
JP (Japan)	SVS15119FJB SVS15119FJS SVS1511AGJB SVS1511AJ*
US (United States)	SVS15113FXB SVS15113FXS SVS15115FXB SVS15116FXB SVS15116FXS SVS15118FXB SVS15118FXS SVS151190X* SVS1511GFYB
PA (Pan-America)	SVS15115FBB SVS15115FDB SVS15115FLB SVS15117FDB SVS15117FLB SVS151190S*
EU (Europe)	SVS1511C5E* SVS1511L3ES SVS1511M3EW SVS1511N3ES SVS1511Q9EB SVS1511R9ES SVS1511S3RB SVS1511S9ES SVS1511T9EB SVS1511T9ES SVS1511U9ES SVS1511V9EB SVS1511V9ES SVS1511V9RB SVS1511W9EB SVS1511X9EB SVS1511X9RB
AP (Asia-Pacific)	SVS15115FGB SVS15115FHB SVS15115FKB SVS15115FNB SVS15115FWB SVS15116GAB SVS15116GGB SVS15116GKB SVS15116GNB SVS15116GWB
CN (China)	SVS151100C* SVS15118ECB SVS15118ECW

*: CTO Model

9-890-888-04

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● Design and specifications are subject to change without notice.

PERSONAL COMPUTER

SONY

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All other names of systems, products and services in this manual are trademarks or registered trade-Marks of their respective owners. In this manual, the (TM) or (R) mark are not specified.

Caution Markings for Lithium/Ion Battery - The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: The battery pack used in this device may present a fi re or chemical burn hazard if mistreated. Do not disassemble, heat above 60 C (140 F) or incinerate. Dispose of used battery promptly. Keep away from children.

CAUTION: Changing the back up battery.
• Overcharging, short circuiting, reverse charging, multilation or incineration of the cells must be avoided to prevent one or more of the following occurrences; release of toxic materials, release of hydrogen and/or oxygen gas, rise in surface temperature.
• If a cell has leaked or vented, it should be replaced immediately while avoiding to touch it without any protection.

The components identified by mark 🔒 contain confidential information.
Strictly follow the instructions whenever the components repaired and/or replaced.

Service and Inspection Precautions

1. Obey precautionary markings and Instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the ⚠ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing Wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires, therefore, be sure to duPlicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

• The temperature of the soldering-iron tip should be about 270 C.
• Do not apply the tip more than three times to the same pattern.
• Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!
LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANSCE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

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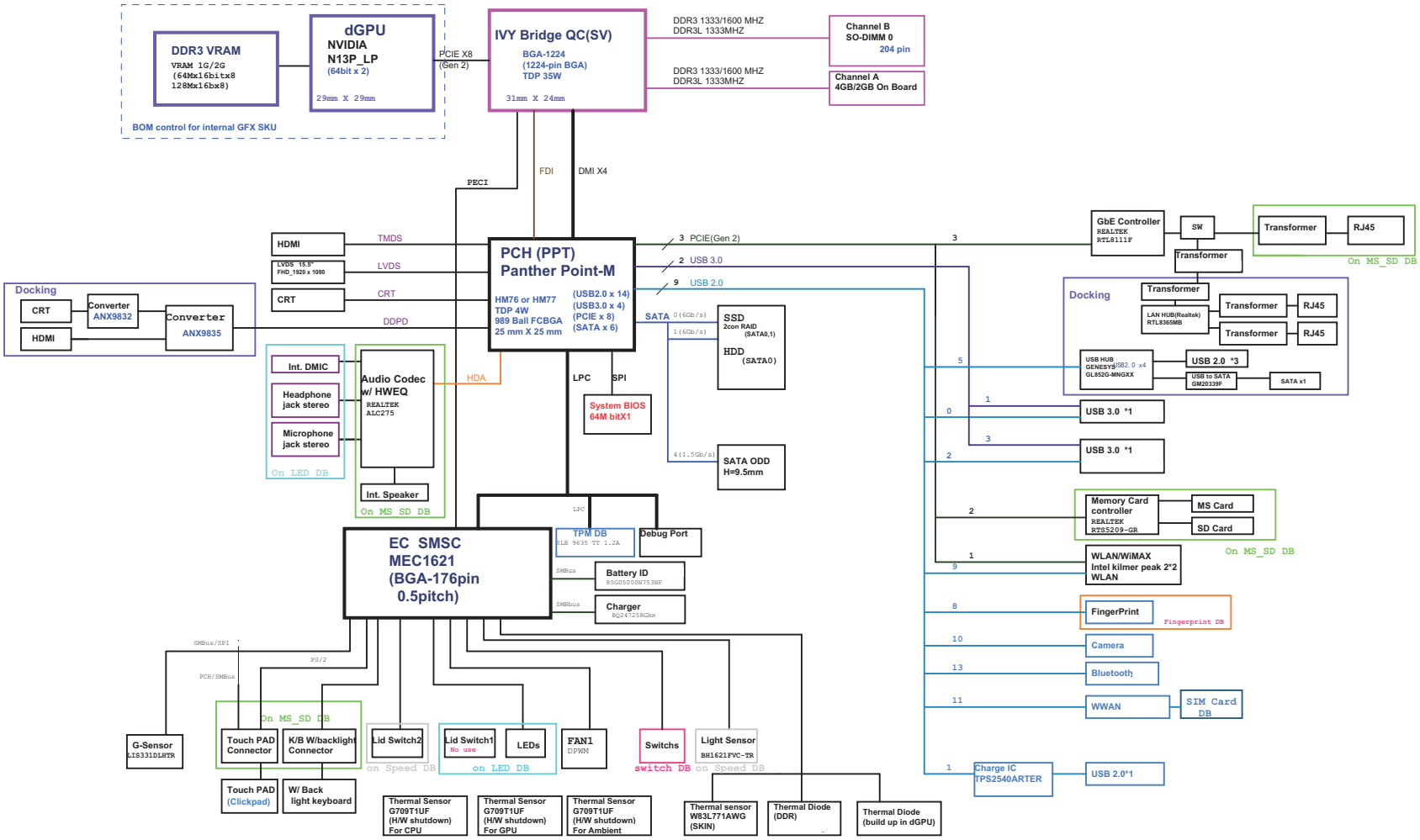
- SPECIFICATIONS are listed on Page 3-1 of "CHAPTER3. EXPLODED VIEWS AND PARTS LIST.
- History of the changes is shown as the "Revision History" at the end of this data.

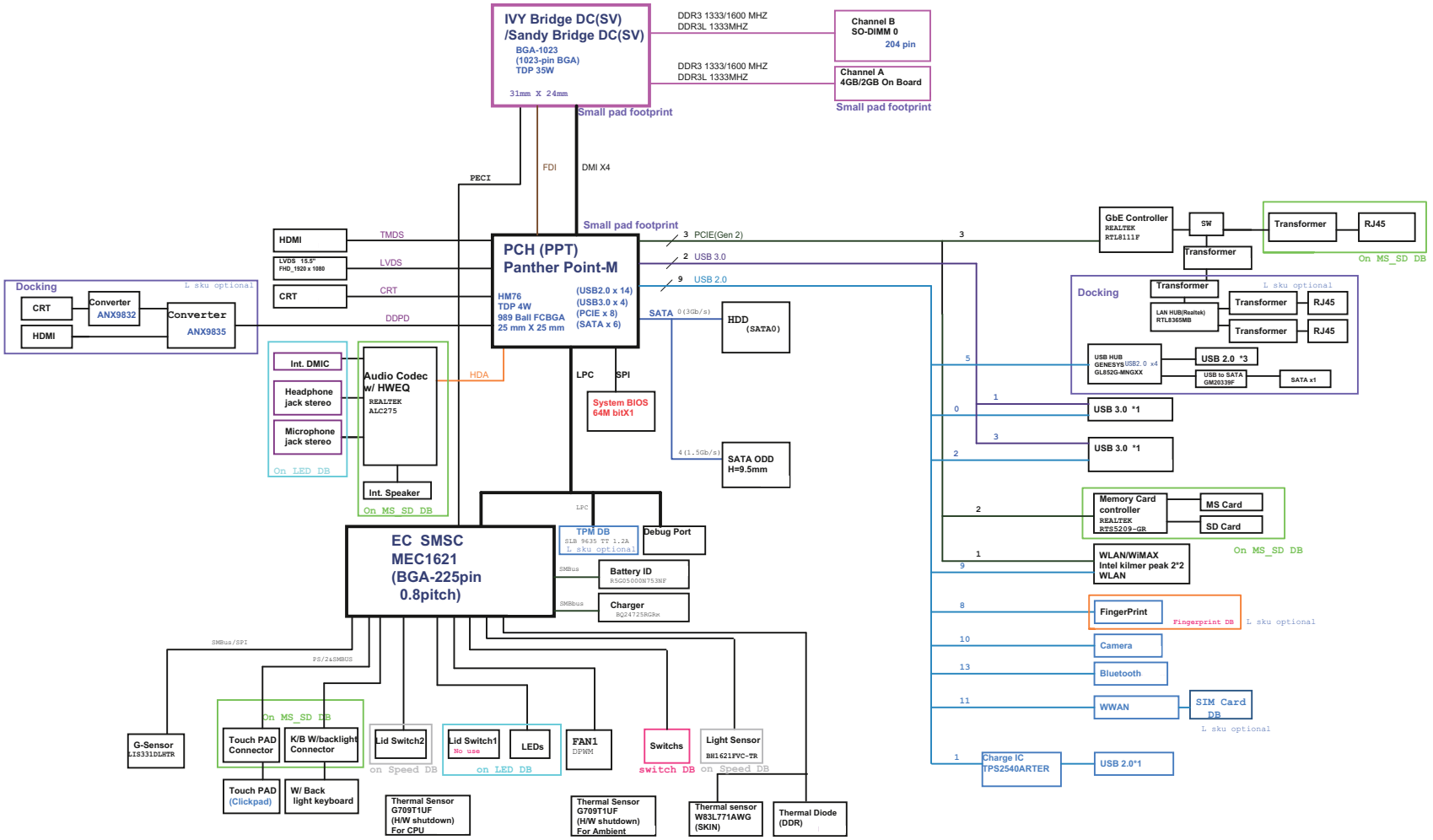
CHAPTER1.
BLOCK DIAGRAM

1-1.SVS151 Series (For Ext-Gfx model)



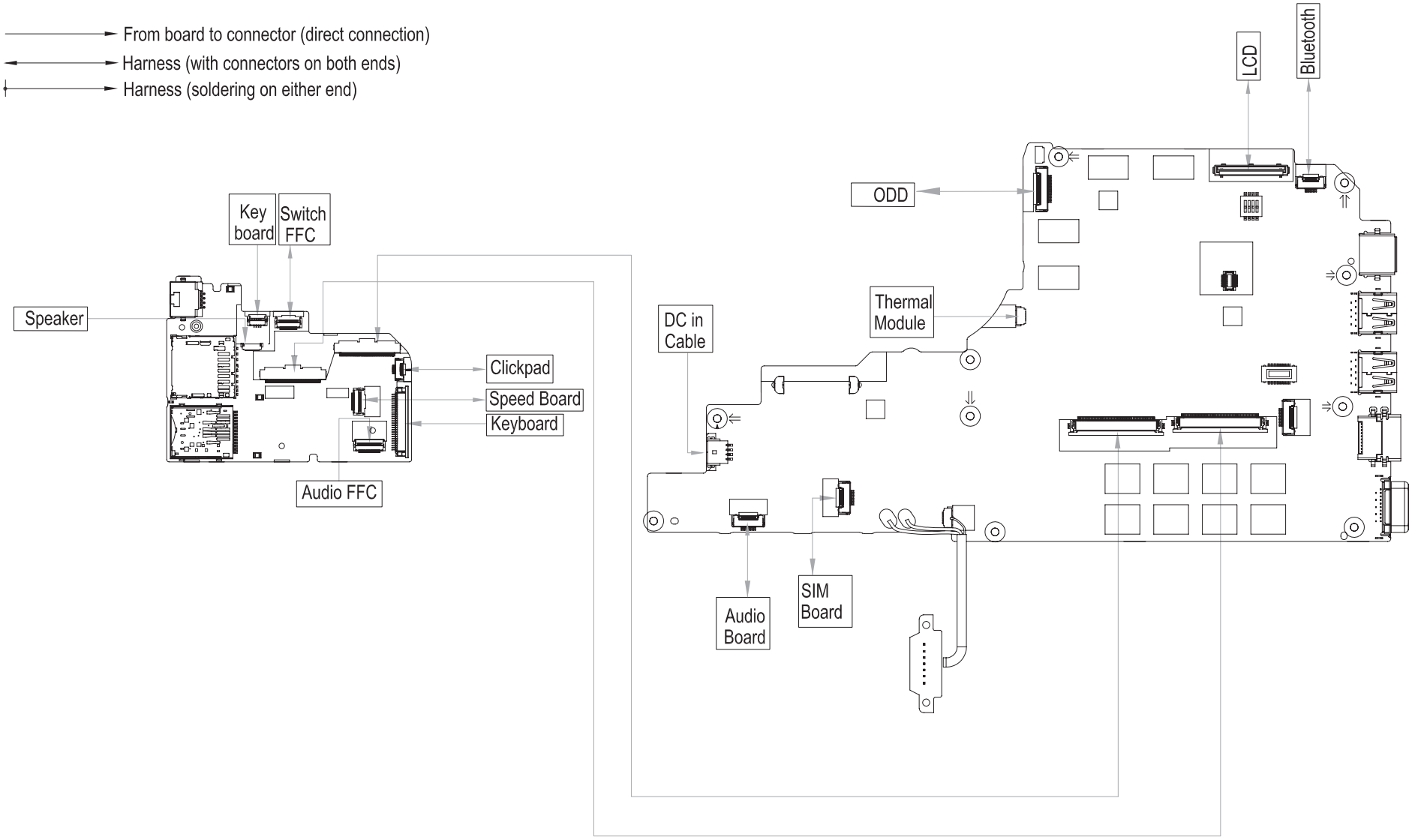
[Sony Confidential]

1-2.SVS151 Series (For Int-Gfx model)



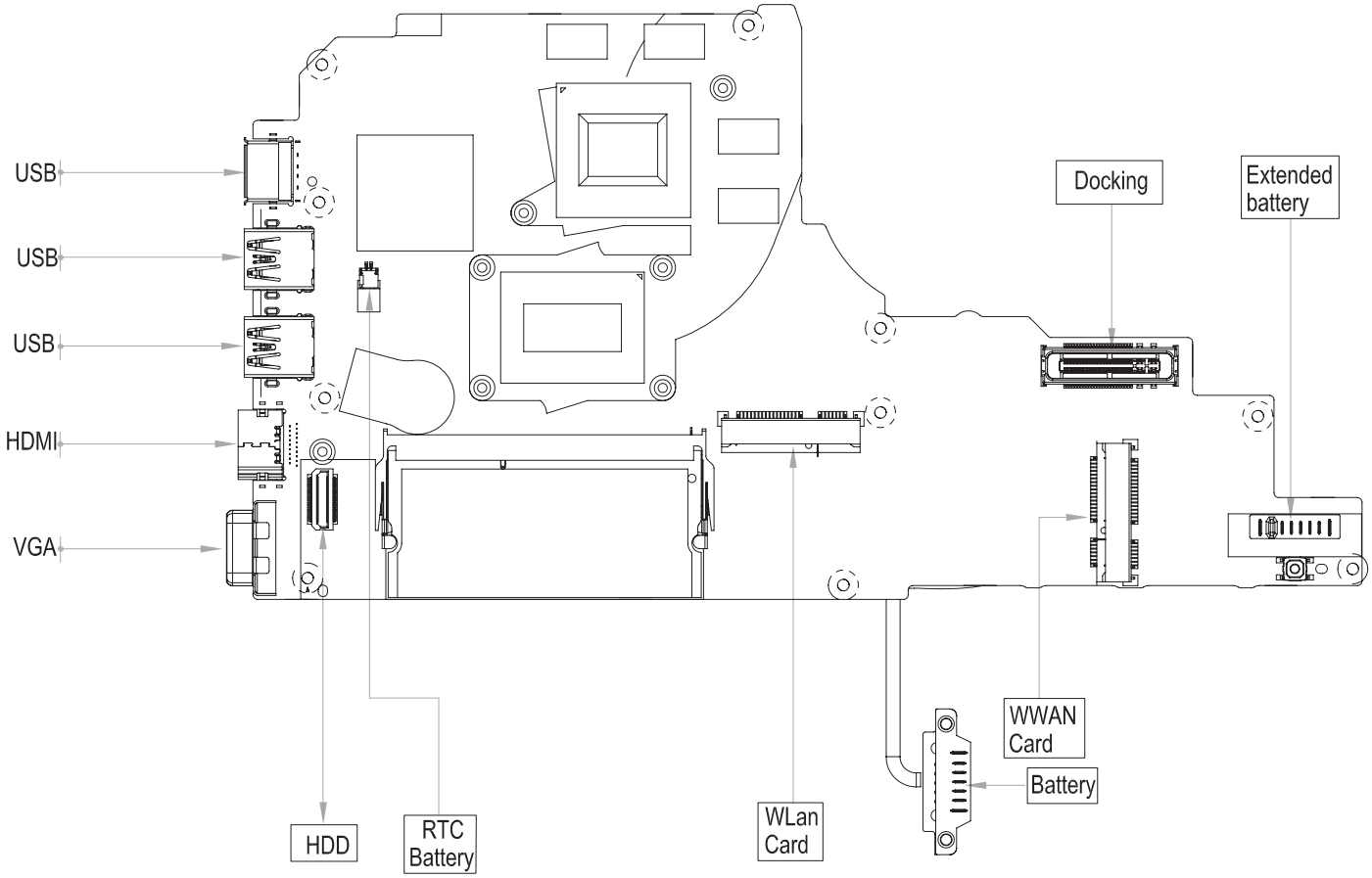
CHAPTER2.
FRAME HARNESS DIAGRAM

2-1.SVS151 Series (TOP)



[Sony Confidential]

2-2. SVS151 Series (BOTTOM)



CHAPTER3.
EXPLODED VIEWS AND PARTS LIST

• The exploded views and parts list are compiled by blocks.
The sections are different depending on the model.
Please refer to list of contents shown.

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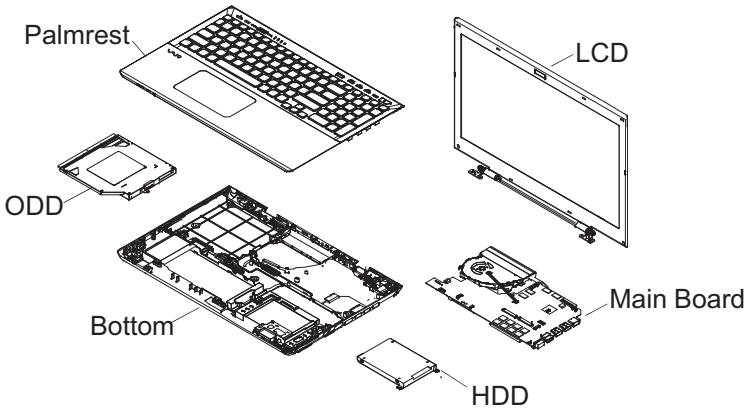


• Double-click on the paper clip mark in the Spec column to open the specifications list.
• To open the parts list, Microsoft office Excel or Excel viewer is required.

		Palmrest	Main Board	Bottom	ODD	HDD	LCD	Accessories	Spec
JP	S15119FJB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15119FJS	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511AGJB	P-1	M-2	B-1	D-1	H-1	L-1	A-1	
	S1511AJ*	P-1	M-1/M-2	B-1	D-1	H-1	L-1	A-1	
US	S15113FXB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15113FXS	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15115FXB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15116FXB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15116FXS	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15118FXB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15118FXS	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S151190X*	P-1	M-1/M-2	B-1	D-1	H-1	L-1	A-1	
	S1511GFYB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
PA	S15115FBB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15115FDB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15115FLB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15117FDB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15117FLB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S151190S*	P-1	M-1/M-2	B-1	D-1	H-1	L-1	A-1	
EU	S1511C5E*	P-1	M-1/M-2	B-1	D-1	H-1	L-1	A-1	
	S1511L3ES	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511M3EW	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511N3ES	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511Q9EB	P-1	M-2	B-1	D-1	H-1	L-1	A-1	
	S1511R9ES	P-1	M-2	B-1	D-1	H-1	L-1	A-1	
	S1511S3RB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511S9ES	P-1	M-2	B-1	D-1	H-1	L-1	A-1	
	S1511T9EB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511T9ES	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511U9ES	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511V9EB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511V9ES	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511V9RB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511W9EB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511X9EB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S1511X9RB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
AP	S15115FGB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15115FHB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15115FKB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15115FNB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15115FWB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15116GAB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15116GGB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15116GKB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15116GNB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15116GWB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
CN	S151100C*	P-1	M-1/M-2	B-1	D-1	H-1	L-1	A-1	
	S15118ECB	P-1	M-1	B-1	D-1	H-1	L-1	A-1	
	S15118ECW	P-1	M-1	B-1	D-1	H-1	L-1	A-1	

*: CTO Model

Note

- Parts List is attached on the upper right portion of each EXPLODED VIEW.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The parts marks "$" are the Reuse Parts.
- The parts marks with "&" indicates specific parts handling for Japan region. Disregard "&" marking for other than Japan region.
- Color after description in [ ] shows color variation name of the main body.
- The model that is accompanied by asterisk (*) is the CTO model.
- Description of [***MBx2], [***MB], [***GBx2], [***GB]indicates the following.
  MB/GB: size of the part
  x2: installed quantity at original production
- Be sure to use the parts marked with●/ □x together with the parts with the same number.
- When replacing the HDD of RAID setting, please exchange to the same HDD that was installed.

Basically, the parts marked "●" should be used for service.
The parts marked "□" in the parts list are substitution parts.
If the part marked "●" is not available, you can order the parts marked "□", but it may not be stocked.

The components identified by mark ! or dotted line with mark ! are critical for safety. Replace only with part number speciried.	Les composants identifiés par une marque ! sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by mark contain confidential information.
Strictly follow the instructions whenever the components repaired and/or replaced.

- If there is the Remarks column in the parts list, the features of applicable models are indicated in it for the parts that are different depending on each model.
  For the abbreviations used in the remarks column, please refer to the <table 1>.

<table 1>

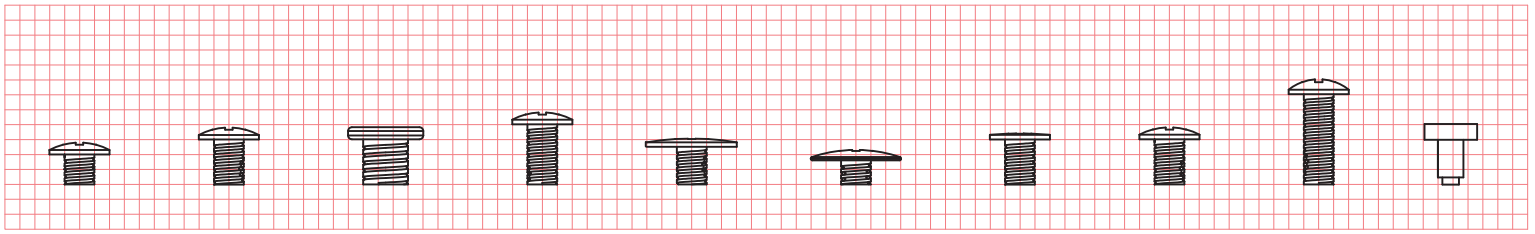
Full-Name	Short-Name
Bluetooth	BT
Felica	Felica
Wireless WAN	WAN
Wireless LAN	WLAN
1seg Tuner	1seg
Finger Print Sensor	FP
Security Chip	TPM
Flash Memory	F Mem
Camera	Camera
Touch screen Panel	Touch screen
Transfer Jet	T-Jet

- If "No-" is described on the left side of the Short-Name, it means 'not equipped'.
  Example: "No-BT" "No-Felica" etc.
- When several descriptions are listed, each description is separated with ", (comma)" or "or". "Comma" means plus.
  Example.1: The parts for the model equipped with BT and Felica and WLAN →BT, Felica, WLAN
  Example.2: The parts for the model equipped with BT or Felica →BT or Felica
- If the color is in the remarks column, it indicates the color of parts itself.

S-1. Screws

Parts List

□Double-click on the paper clip mark to open the parts list.
□To open the parts list, Microsoft office Excel or Excel viewer is required.



B1	B2	B5	B11	B13	B15	B16	B18	B19	B21
M2XL2	M2XL3	M3XL3	M2XL4	M2XL2.5	M2XL1.6	M2XL3	M2XL3	M2XL6	M1.7XL3.5
Silver	Black	Silver	Silver	Silver	Black	Silver	Silver	Black	Silver

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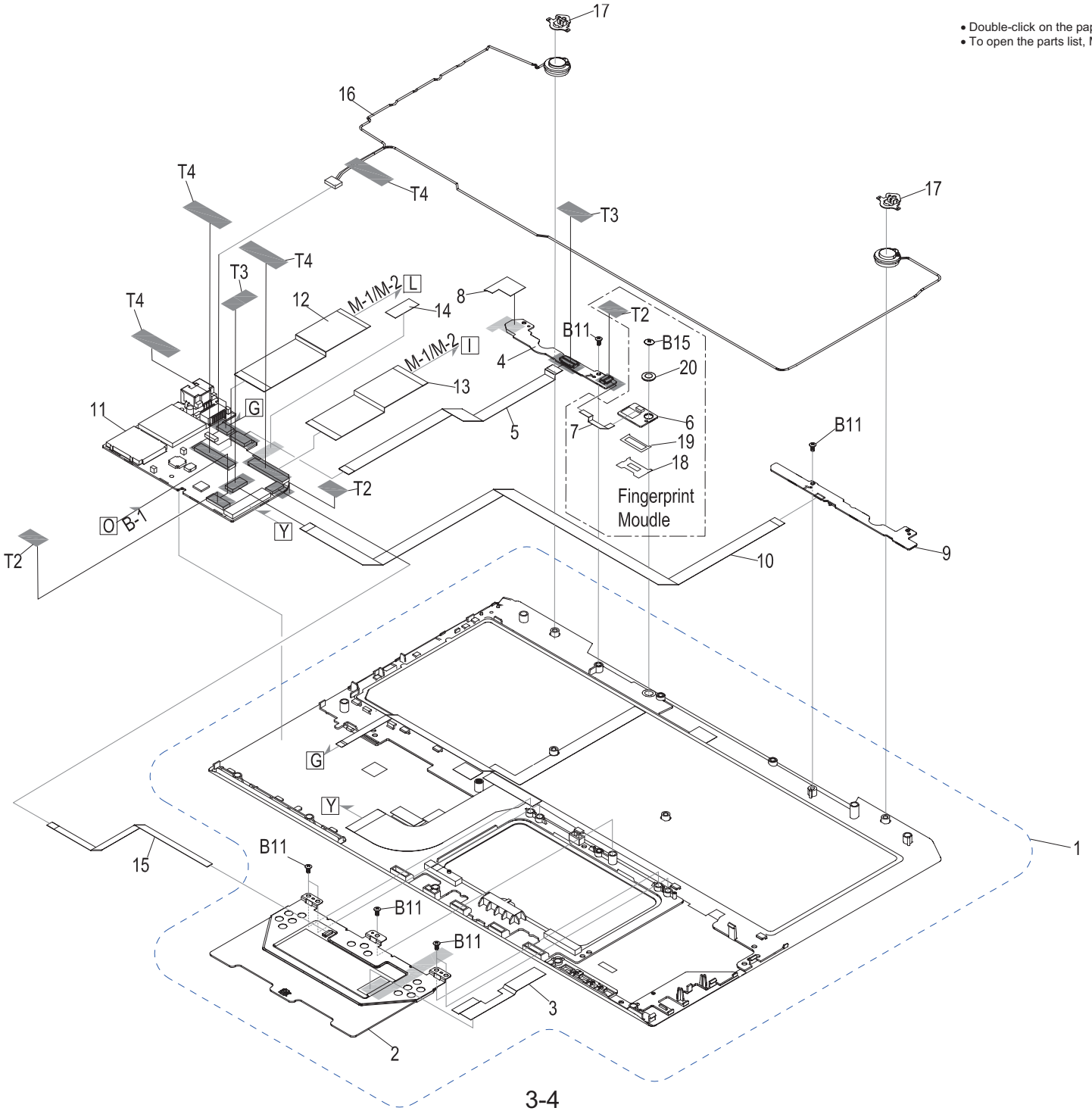
P-1. Palmrest

Parts List

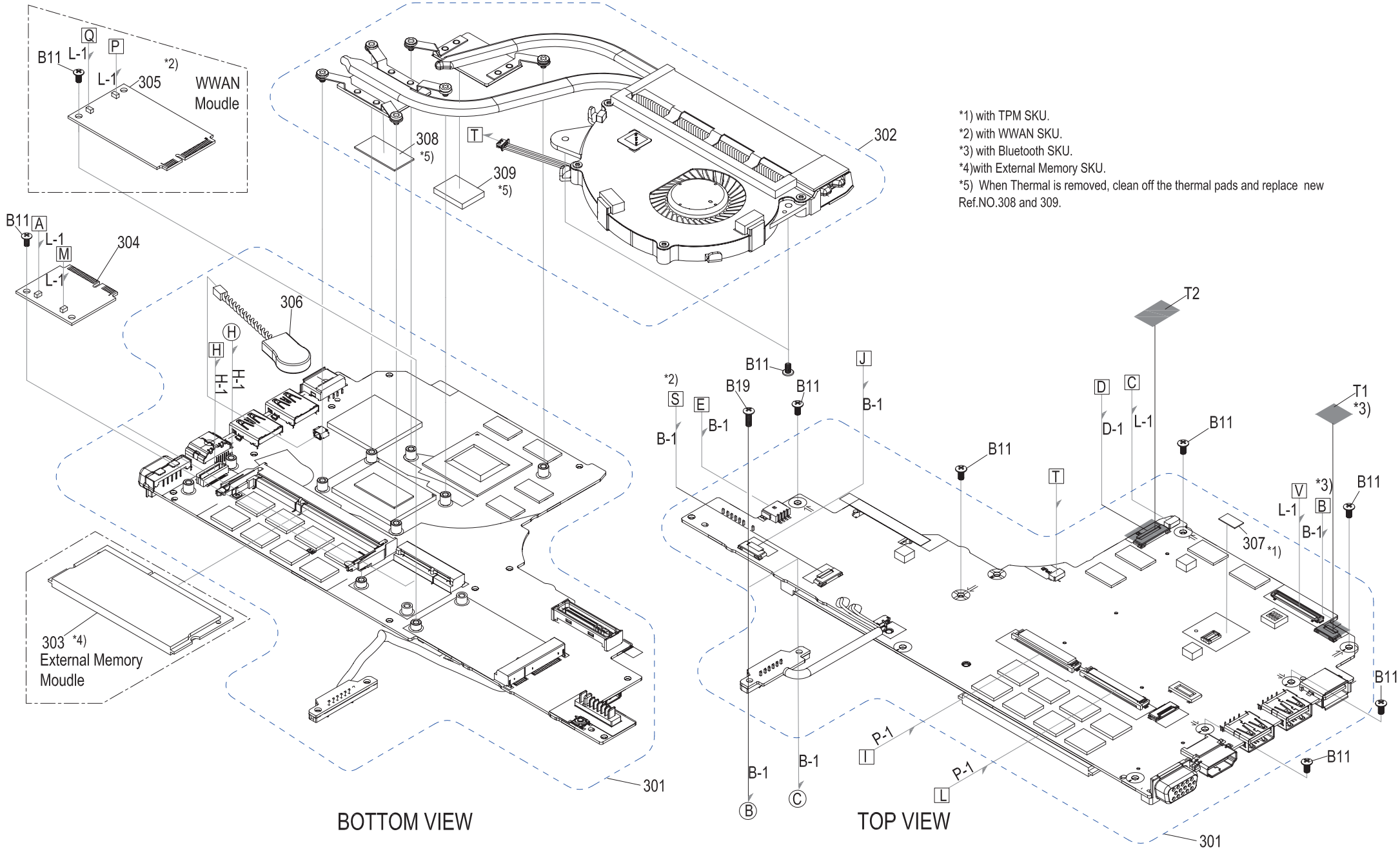
- Double-click on the paper clip mark to open the parts list.
- To open the parts list, Microsoft office Excel or Excel viewer is required.



[Sony Confidential]

- Double-click on the paper clip mark to open the parts list.
- To open the parts list, Microsoft office Excel or Excel viewer is required.

M-1. Main Board (For Ext-Gfx model)



*1) with TPM SKU.
*2) with WWAN SKU.
*3) with Bluetooth SKU.
*4)with External Memory SKU.
*5) When Thermal is removed, clean off the thermal pads and replace new Ref.NO.308 and 309.

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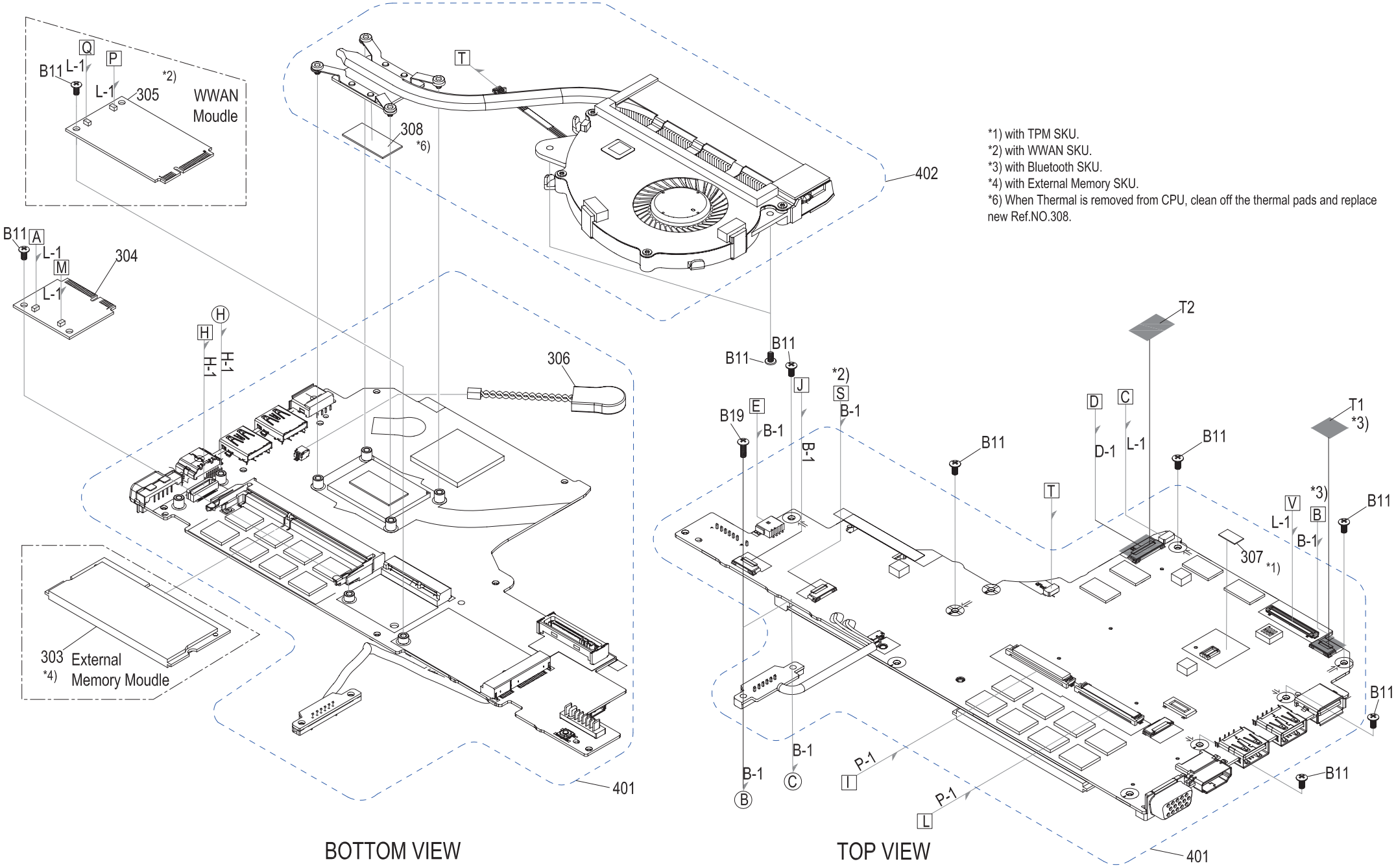
M-2. Main Board (For Int-Gfx model)

- Double-click on the paper clip mark to open the parts list.
- To open the parts list, Microsoft office Excel or Excel viewer is required.



*1) with TPM SKU.
*2) with WWAN SKU.
*3) with Bluetooth SKU.
*4) with External Memory SKU.
*6) When Thermal is removed from CPU, clean off the thermal pads and replace new Ref.NO.308.

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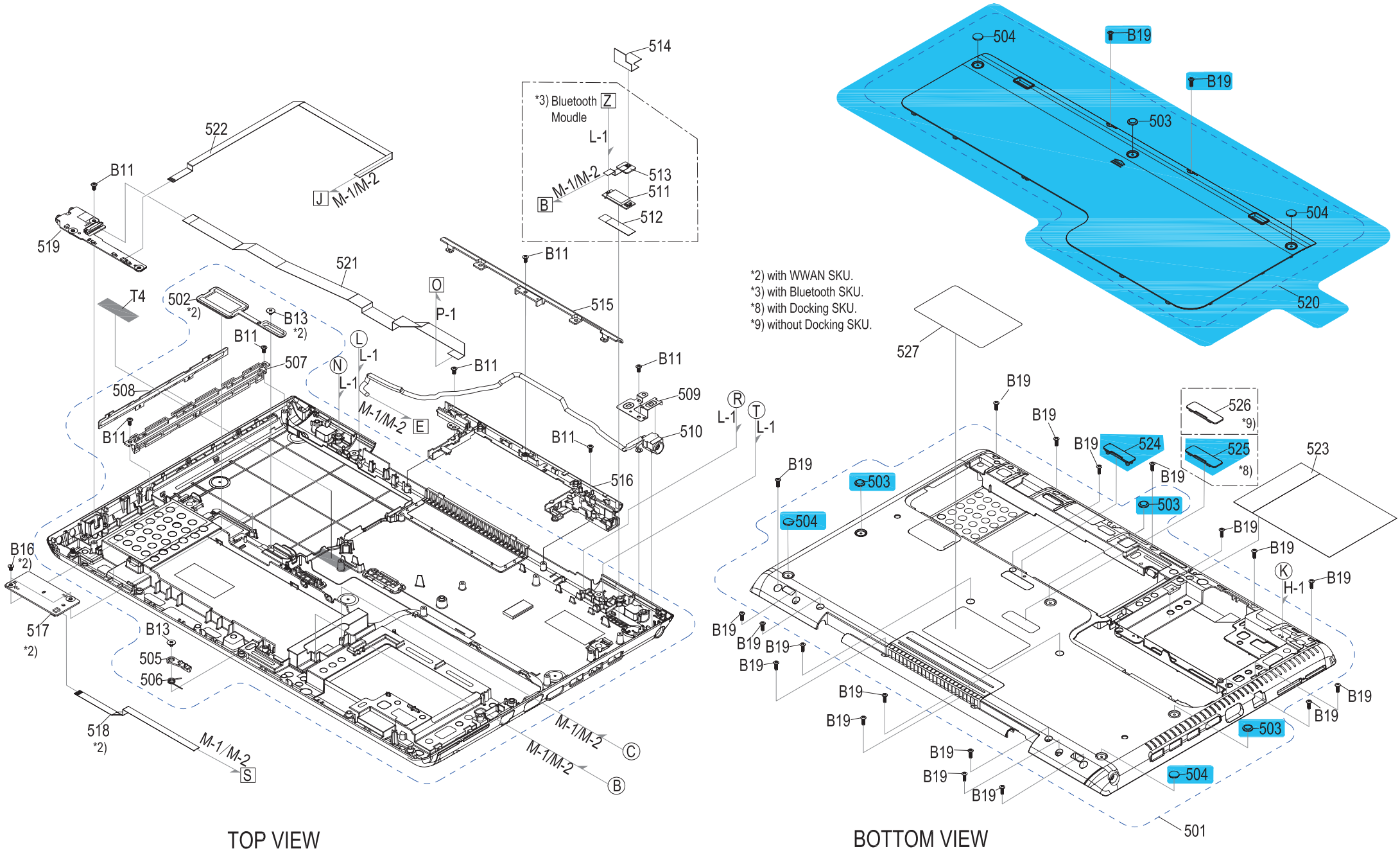
B-1. Bottom

Parts List

- Double-click on the paper clip mark to open the parts list.
- To open the parts list, Microsoft office Excel or Excel viewer is required.



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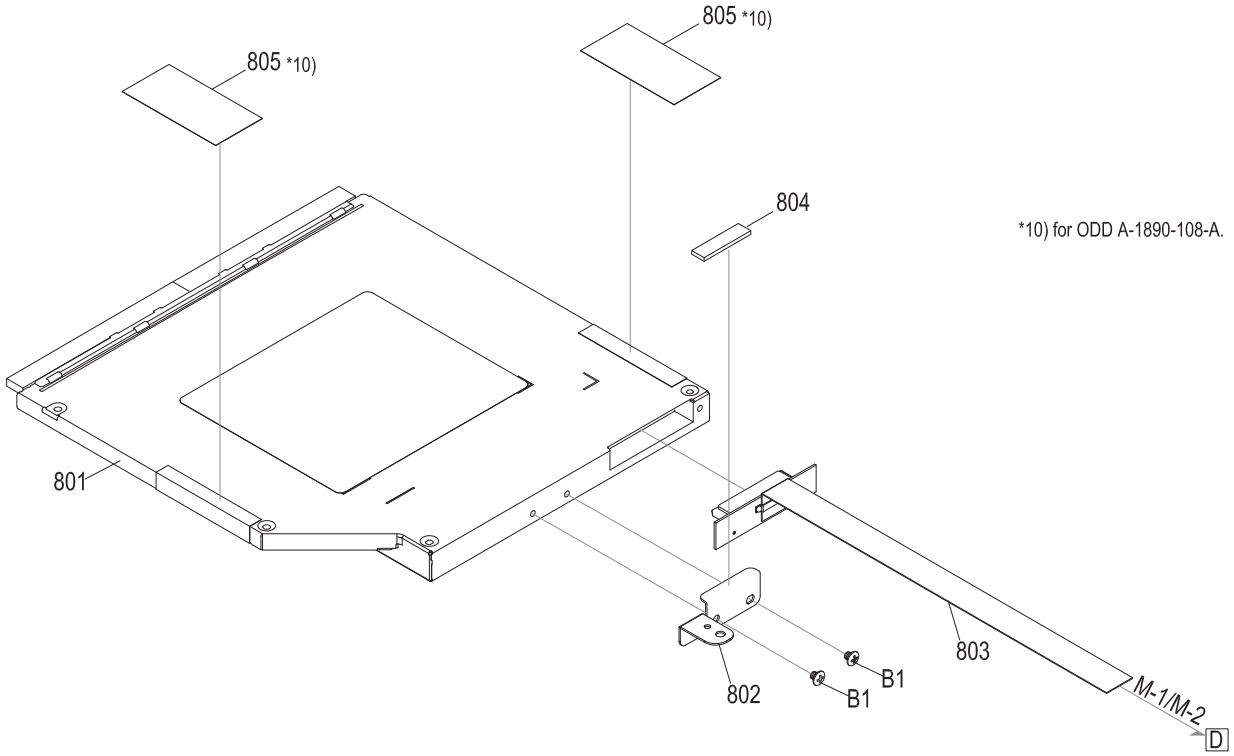
D-1. ODD

Parts List

- Double-click on the paper clip mark to open the parts list.
- To open the parts list, Microsoft office Excel or Excel viewer is required.

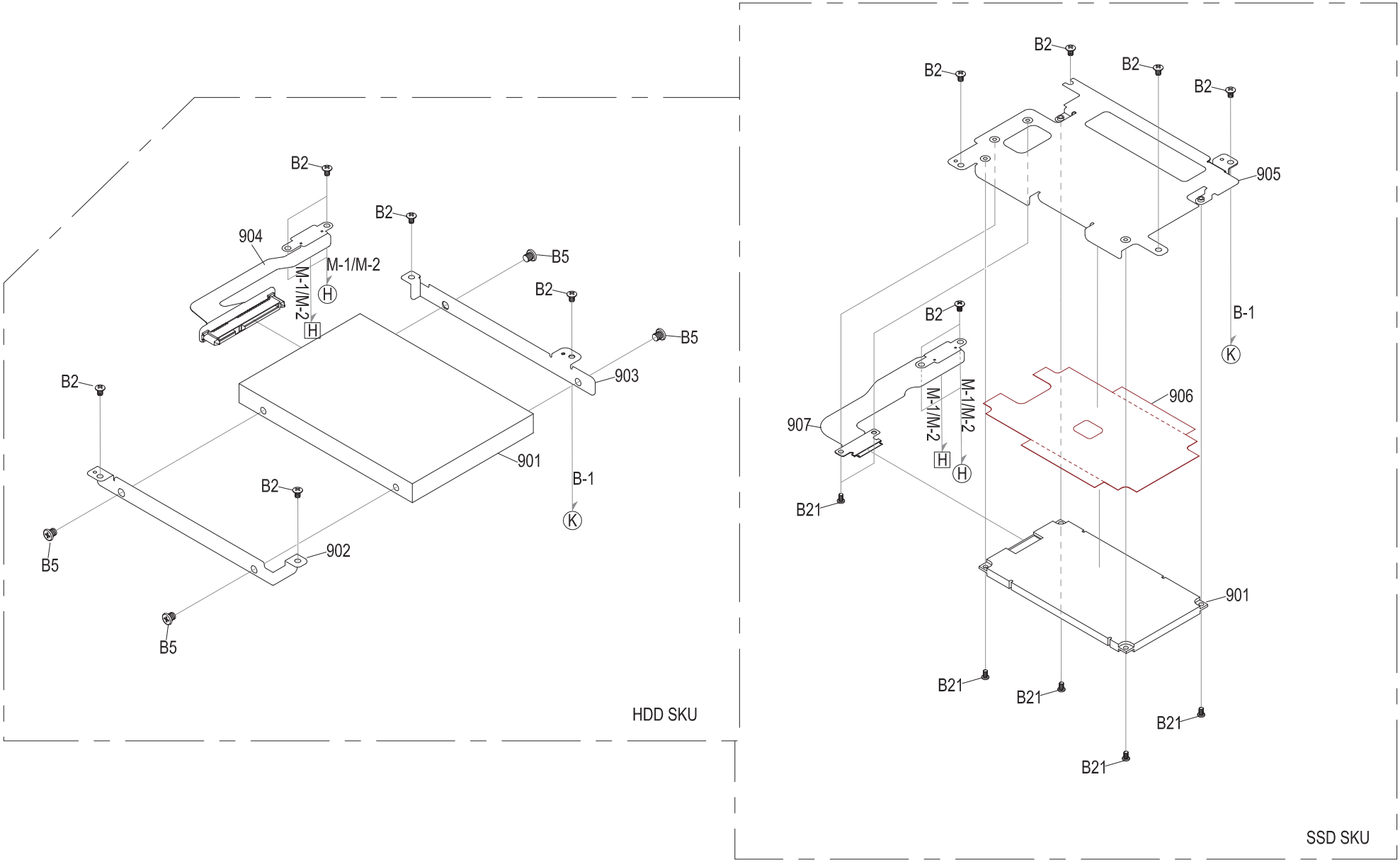


*10) for ODD A-1890-108-A.

H-1. HDD

Parts List

- Double-click on the paper clip mark to open the parts list.
- To open the parts list, Microsoft office Excel or Excel viewer is required.



• Double-click on the paper clip mark to open the parts list.
• To open the parts list, Microsoft office Excel or Excel viewer is required.

L-1. LCD

SVS151 Series have two kinds of WLAN ANTENNA (Ref.No.1006 and 1007).
When replacing either, The Main and Aux Antenna must use same vendor's parts.
Part's vendor can be distinguished by color of red boxed area. The black ones are ACON's, the green ones are INPAQ's.

ACON

A-1883-344-A
ANTENNA MAIN

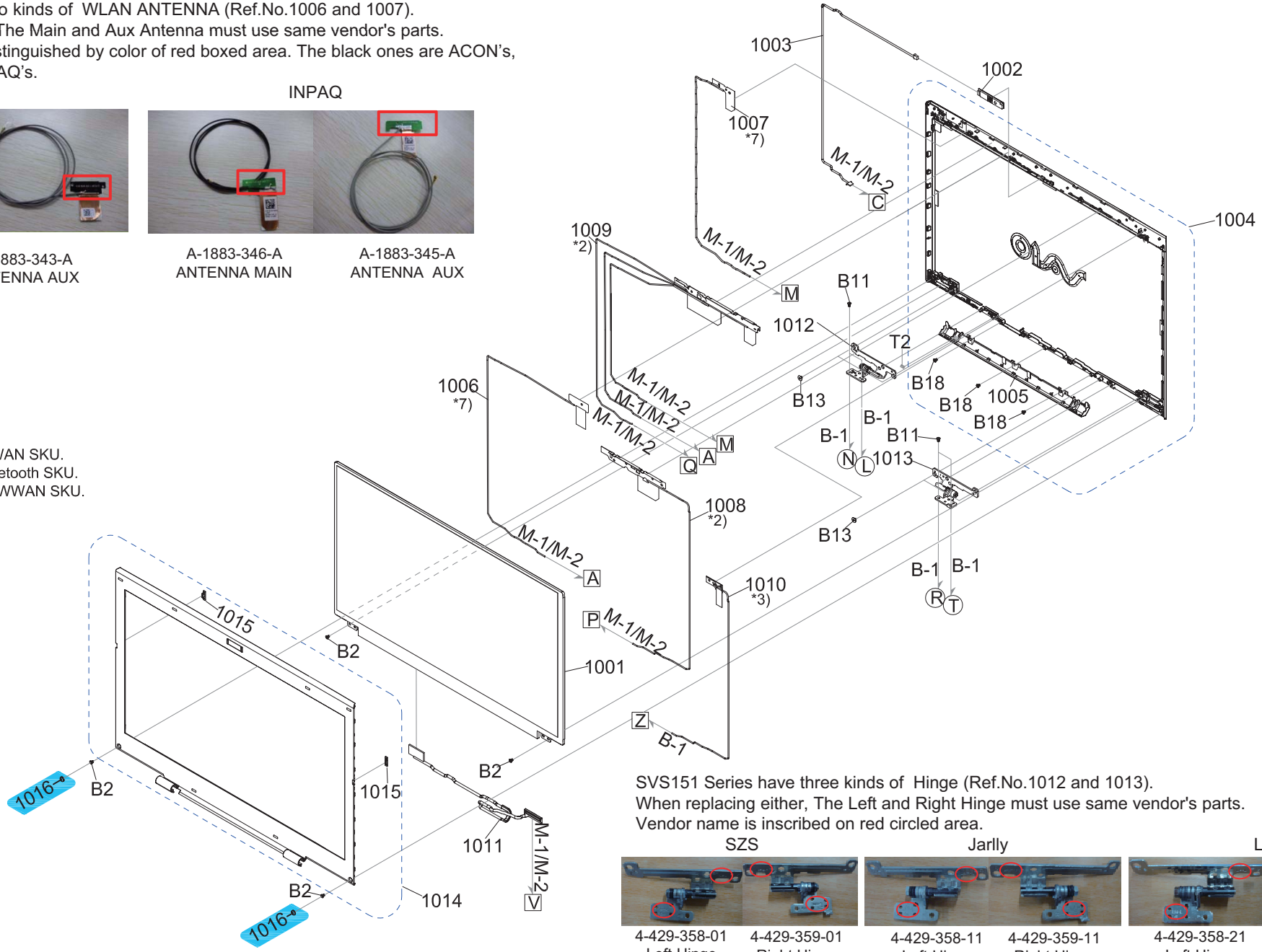
A-1883-343-A
ANTENNA AUX

INPAQ

A-1883-346-A
ANTENNA MAIN

A-1883-345-A
ANTENNA AUX

*2) with WWAN SKU.
*3) with Bluetooth SKU.
*7) without WWAN SKU.



SVS151 Series have three kinds of Hinge (Ref.No.1012 and 1013).
When replacing either, The Left and Right Hinge must use same vendor's parts.
Vendor name is inscribed on red circled area.

SZS

4-429-358-01
Left Hinge

4-429-359-01
Right Hinge

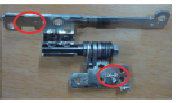
Jarlly

4-429-358-11
Left Hinge

4-429-359-11
Right Hinge

LH

4-429-358-21
Left Hinge



4-429-359-21
Right Hinge

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A-1. Accessories

Parts List

□Double-click on the paper clip mark to open the parts list.
□To open the parts list, Microsoft office Excel or Excel viewer is required.

2005
Power Cord

2005
Power Cord
(for Stick Type Adapter)

2006
AC Adapter

2006
AC Adapter
(Stick Type)

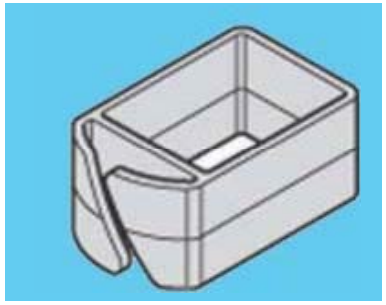
2007
Battery Pack

2008
Extended Battery

2009
Battery Adapter

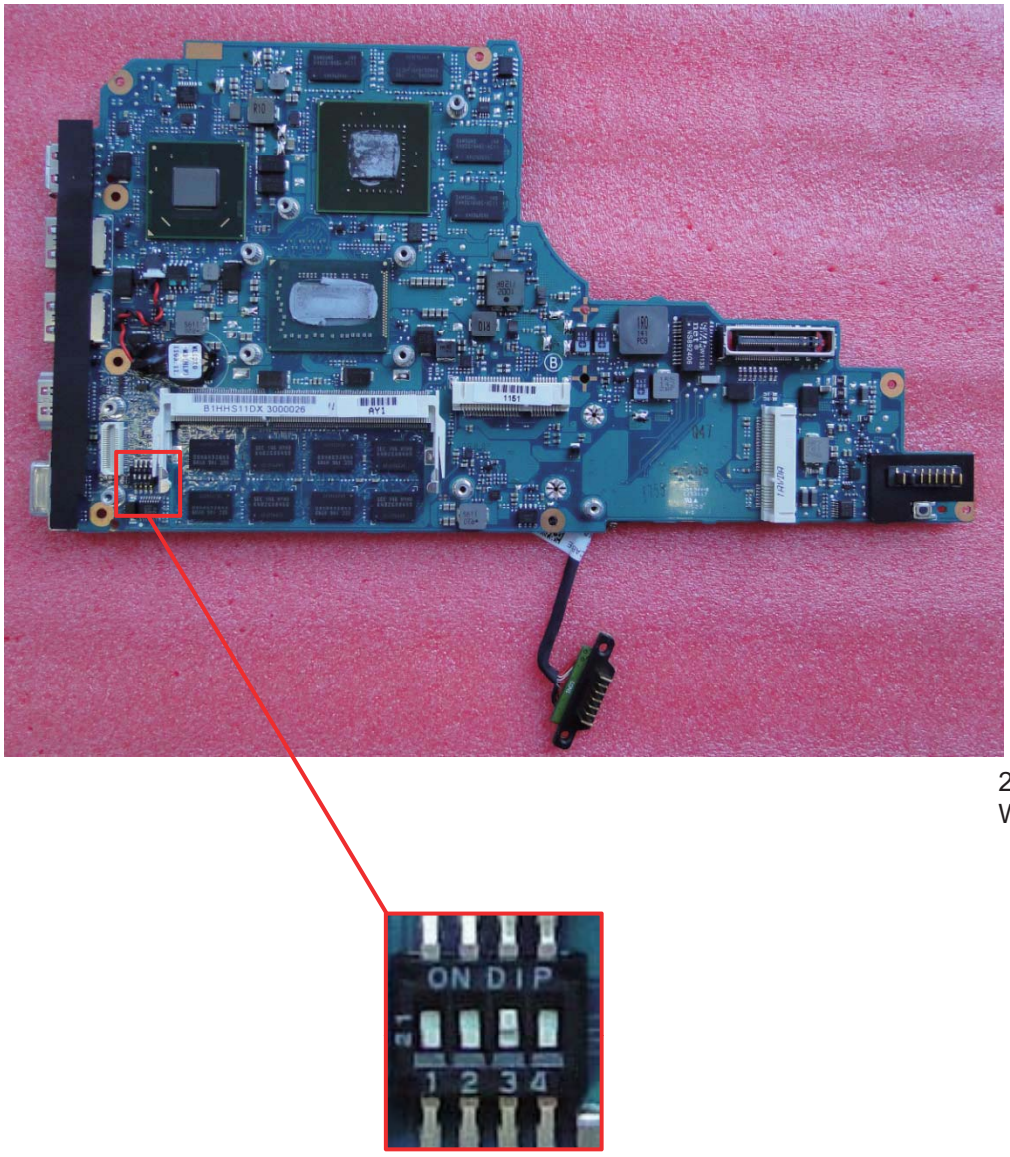
2011
Carrying Pouch

2012
Cable Clip



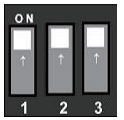
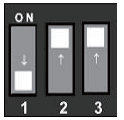
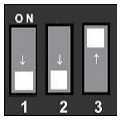
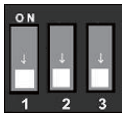
WWAN DIP Switch

WWAN DIP Switch Location



There are four DIP Switches.

1. The first three ones is used for WWAN Card, please set them as below.

SVS1511AJ* (JP) LTE, with GPS	
S1511X9RB (EU) LTE, without GPS	
S1511C5E/S1511T9EB/S1511T9ES/S1511W9EB/S1511X9EB (EU) GOBI3K, without GPS	
For all the SKUs without WWAN Card,	

2.The fourth one is used for Intel Anti-Theft setting.
When replace Main Board, not to change the normal setting of the replaced one

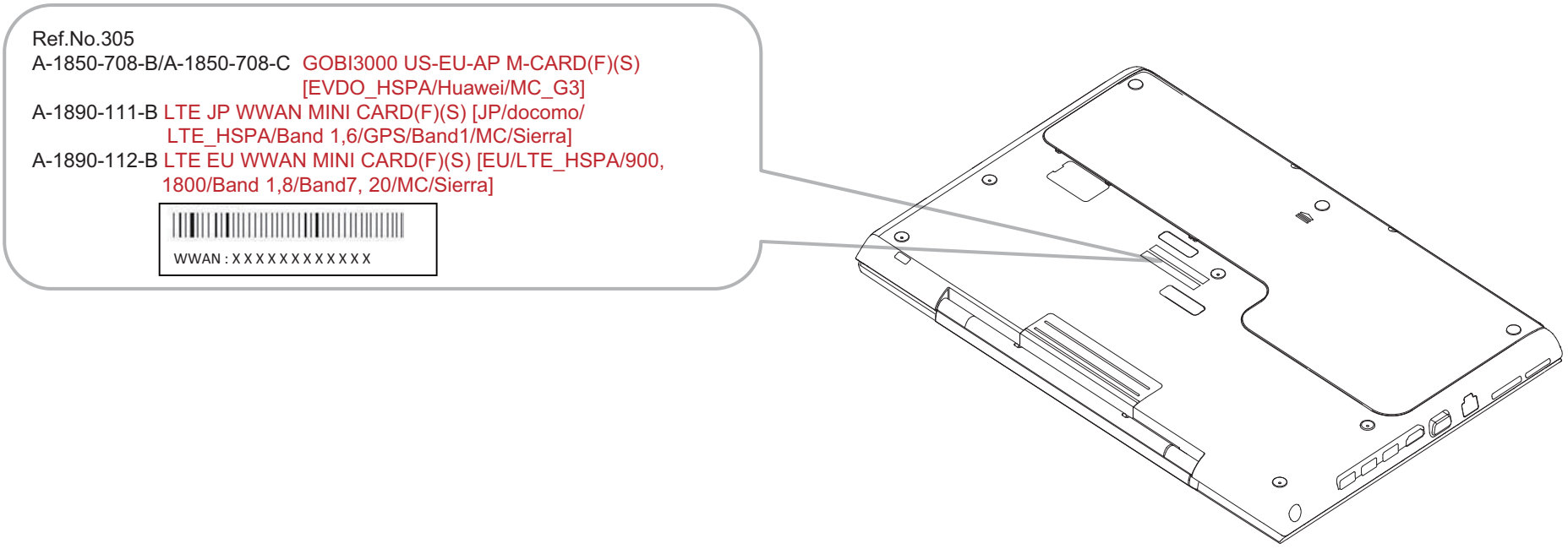
For all EU SKUs. With Anti-Theft	
For all JP, US, PA, AP, CN SKUs. Without Anti-Theft	

CHAPTER4.
OTHERS

4-1.Note for WWAN Board Replacement

When replacing the WWAN Board (Ref.305 A-1850-708-B/A-1850-708-C/A-1890-111-B/A-1890-112-B), change the barcode label on the bottom.

1. Peel off the barcode label which is attached to the bottom. (Refer to the figure below.)

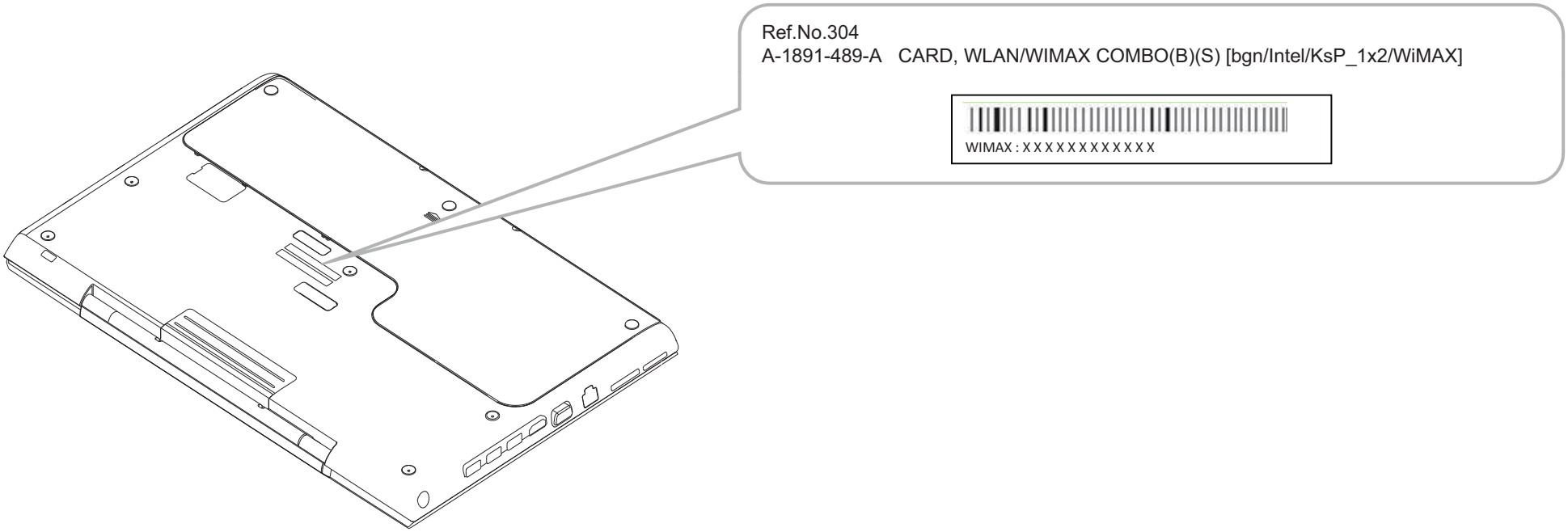

Ref.No.305
A-1850-708-B/A-1850-708-C GOBI3000 US-EU-AP M-CARD(F)(S) [EVDO_HSPA/Huawei/MC_G3]
A-1890-111-B LTE JP WWAN MINI CARD(F)(S) [JP/docomo/ LTE_HSPA/Band 1,6/GPS/Band1/MC/Sierra]
A-1890-112-B LTE EU WWAN MINI CARD(F)(S) [EU/LTE_HSPA/900, 1800/Band 1,8/Band7, 20/MC/Sierra]
WWAN : XXXXXXXXXXXX

2. Attach the barcode label which is included with the WWAN Board to the position where you peeled off the label in the step 1.

4-2.Note for WIMAX Board Replacement

When replacing the WIMAX Board (Ref.304 A-1891-489-A), change the barcode label on the bottom.

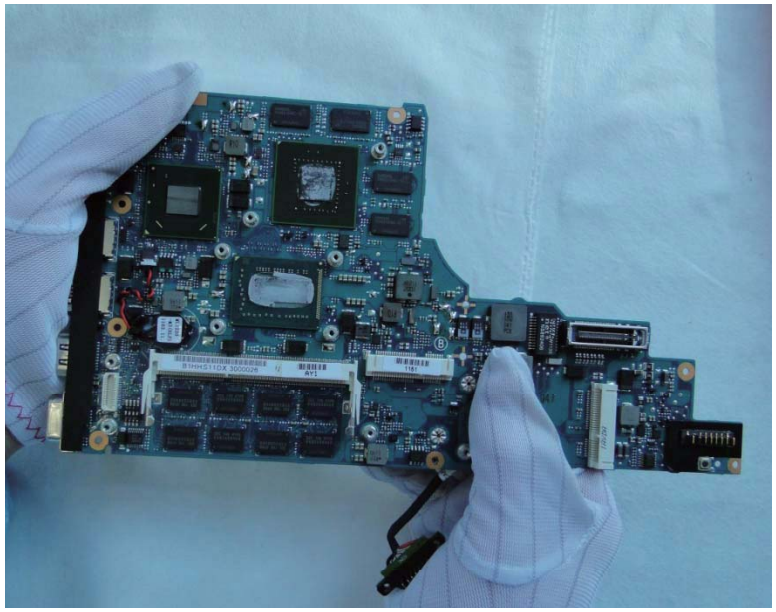
1. Peel off the barcode label which is attached to the bottom. (Refer to the figure below.)



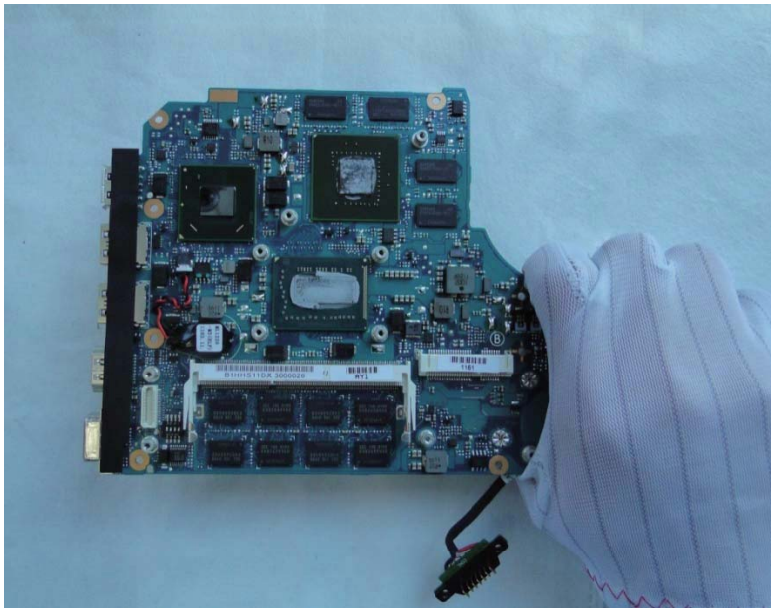
2. Attach the barcode label which is included with the WIMAX Board to the position where you peeled off the label in the step 1.

4-3 Holding Method of Main Board

1. When operating with both hands, gently hold the middle of Main board edge as show.
2. When operating with one-hand, gently hold the middle of Main board edge and keep vertical.



(Level)



(Vertical)

SVS151 Series (JP/US/PA/EU/AP/CN)

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CS & Quality Div. VAIO Global CS Dept.

Revision History

Suffix	Ver.	Date	Contents	QM No.
-01	Ver.1	2012.05.21	First Edition	
-02	Ver.2	2012.07.09	[ADD][CHG][DEL][COR] Page3-3, Page3-4, Page3-5, Page3-6, Page3-7, Page3-9, Page3-10, Page3-11, Page4-2	
-03	Ver.3	2012.09.03	[ADD][COR][CHG] Page3-4, Page3-5, Page3-6, Page3-7, Page3-8, Page3-10, Page3-11	
-04	Ver.4	2012.11.01	[ADD][COR][CHG][DEL] Page3-4, Page3-5, Page3-6, Page3-7, Page3-9, Page3-11, Page4-1	
<Remarks>				